

A NEW FOSSORIAL SNAKE (*RHINOPHIS*  
*DORSIMACULATUS*) FROM CEYLON.

BY

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(*With one plate and one text-figure.*)

The new snake here described belongs to the genus *Rhinophis* Hemprich, a genus restricted to southern India and Ceylon and representing one of the most advanced phases of fossorial adaptation in the suborder Serpentoidea.

In this genus not only are the head shields and tail strongly modified for such a habitat but the pigmentation is remarkable in that a number of species, particularly those from the more arid districts, display the reverse condition to that usual in ordinary snakes by being light dorsally, and dark ventrally. The variety of bright colors displayed by this family, the Uropeltidae, and the related Ilysiidae, affords a striking contrast to the sombre pigmentation of either the equally fossorial Typhlopidae, or some of Ceylon's fossorial lizards of the family Scincidae. Members of the family Uropeltidae are remarkably stenotopic, and the variety and abundance of the species of *Rhinophis* in Ceylon as compared with India, suggests that this Island is the original home of the genus from whence it apparently entered the sub-continent during one of the more recent Pleistocene connexions between the two countries. Six of the seven species recorded from Ceylon possess large caudal shields which are longer than half the shielded area of the head. These are further sub-divided into species in which the rostral shield is at least half the length of the shielded area of the head, and into those in which it is shorter. Another method of sub-division is by estimating the relative lengths of the rostral and parietals in fractions of the length of the frontal shield. When the species is not uniformly colored the easiest method of identification is by attention to pigmentation which is more or less constant for each species, but this is not possible in decolorized spirit specimens.

The large rostral and caudal shields and distinctive color pattern of black vertebral blotches along an orange dorsal band assist in the ready identification of the new *Rhinophis* for which the specific name *dorsimaculatus* is here proposed.

In Ceylon there are two recorded species with large caudal and rostral shields, the rostral being twice as long as the frontal or longer. In one of them, *R. punctatus* Müller, the frontal is as long as the parietal; in the other, *R. porrectus* Wall. it is only about two thirds (Wall *Snakes of Ceylon* 1921, fig. 13). The following comparison of these two species, as described by Wall, with the new form shows the relationships between the three. Features of interest in

the new species are its reduced number of scales and body length, the larger rostral, and the breaking up of the black vertebral band into blotches which might be regarded as signs of progressive specialization.

	<i>R. porrectus</i>	<i>R. tinctatus</i>	<i>R. dorsimaculatus</i> sp. nov.
Frontal length in rostral length.	twice	twice	more than twice
Frontal length in parietal length.	two-thirds	equal	twice
Caudal shield length in shielded part of head length ...	three- quarters	equal	three-quarters
Number of ventrals ...	281	246-236	238
Anterior and posterior costal counts ...	19, 17	19, 17	17, 16-17
Body diameter contained in total length ...	76	49-47	43
Dorsal yellow band marked with dark vertebral ...	band	band	blotches

**Rhinophis dorsimaculatus** sp. nov., pl. I.

This snake is readily distinguished from other species of *Rhinophis* by the characters tabulated above. It is known from two specimens, in one of these

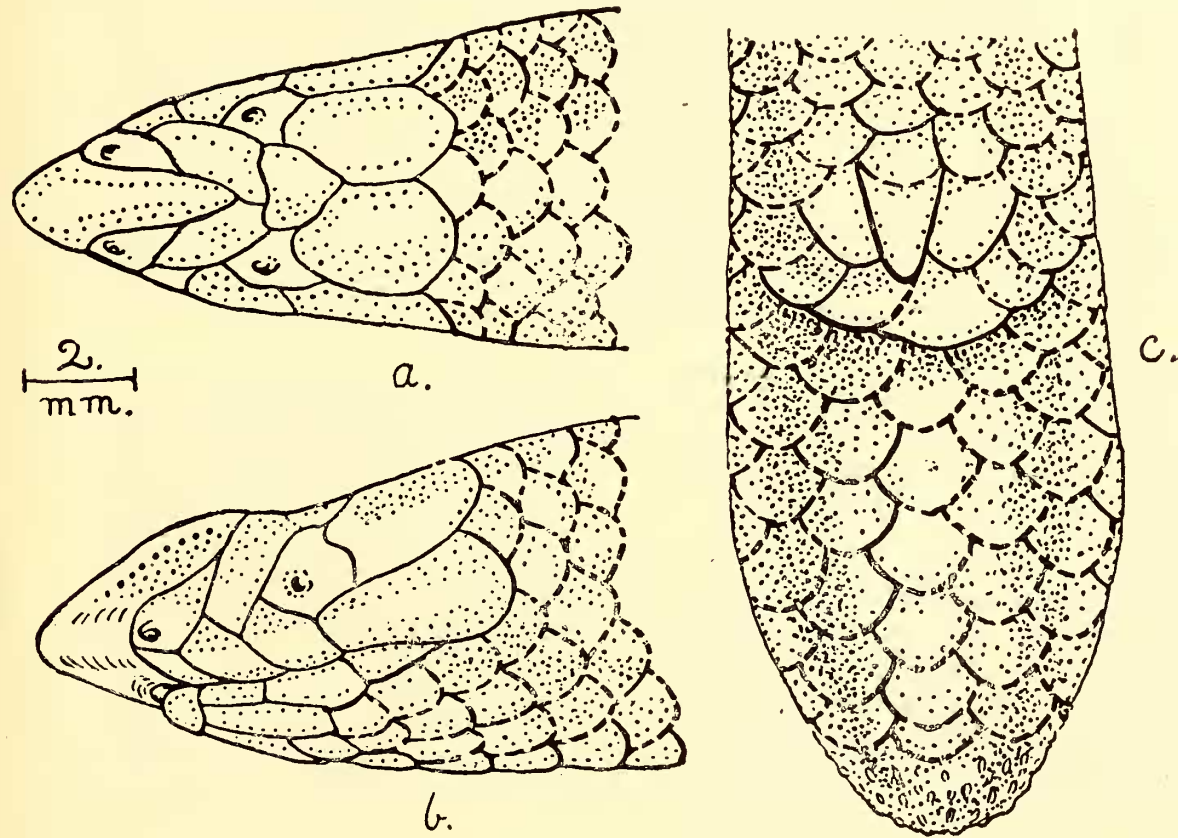


Fig. 1. *Rhinophis dorsimaculatus* sp. nov.  $\times 5\frac{1}{4}$  natural size.  
(a) dorsal view of head.  
(b) ventrolateral view of head.  
(c) ventral view of tail.

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the head is missing. The snake possesses a strongly arched, overshoot snout and the body is not noticeably enlarged anteriorly.

*Colour.* One of the most conspicuously coloured snakes of Ceylon (Pl: 1). In the freshly preserved specimen the head shields are brown, suffused with bright orange. Dorsally there is a broad orange vertebral band occupying about five or six longitudinal rows, and in it the three more or less median rows possess black centres and form a zig-zag band for about five head lengths, after which it breaks up into a series of about forty black blotches, each larger than the head. The remaining body scales are black with yellow margins which form fine, zig-zag, yellow, longitudinal lines both laterally and ventrally. The sixth or seventh longitudinal scale row from the ventrals lacks black pigment as in a few other species of *Rhinophis*. The caudal shield is brown suffused with orange and possesses a dark 'U' shaped mark opening dorsally.

*Pholidosis.* Shielded portion of head slightly longer than caudal shield, rostral shield strongly carinate, arched, equals half the head length and completely separates the nasals; prefrontals contiguous and about twice as long as broad; frontal subtriangular as broad as long, is less than half the length of rostral and equals half the length of the parietal. Ocular about thrice length of pupil and somewhat narrowly in contact with frontal which it slightly exceeds in size. Supralabials four, the last being the largest head shield. Mental with a broadly rounded posterior margin, infralabials three, the second the largest; the suture between the first and second infralabials is under the suture between the second and the third supralabials, that between the second and third is under the suture between the third and fourth supralabials. The first row of post-mental scales is elongate and does not extend behind the anterior halves of the second infralabials (fig. 1b). Body scales as wide as long, subequal, 17 costals at two head lengths behind head, 17 or 16 at mid-body, ventrals 238 extremely feebly enlarged, preanals enlarged two or three in one or two rows, subcaudals entire 6, (fig. 1c), scales round caudal shield 12, caudal shield convex, rugose with numerous small tubercles and is about three-fourths the length of the shielded part of the head.

*Dimensions.* The type specimen No. 86 Colombo Museum, measures as follows:—length of shielded area of head 7.6 mm., diameter of body 8 mm., total length 350 mm., tail length 8.5 mm., width of frontal 1.7 mm., length of frontal 1.7 mm., length of rostral 3.8 mm., length of parietal 2.8 mm., interorbit 2.6 mm., length of gape 6 mm., caudal shield 6 mm. long 5.2 mm. wide.

*Distribution.* Known from two specimens, one obtained in February 1938 the other in March 1941 from the coastal village of Marichchukate, North Western Province, Ceylon. This area is unusually arid, and is of special interest in possessing such Indian dry zone reptiles as the scaly gecko *Lophopholis scabriceps* (Annandale), the sand boa *Gongylophis conicus* Russell, and the saw-scaled viper *Echis carinata* Russell.

In conclusion I wish to express my thanks to Dr. Baini Prashad, Director of the Zoological Survey of India, Indian Museum, Dr. A. Aiyappan, Acting Superintendent, Madras Government Museum, and to Mr. S. H. Prater of the Bombay Natural History Society for comparing photographs of this snake with the specimens in their collections.

#### EXPLANATION OF PLATE I.

Photographs of *Rhinophis dorsimaculatus* sp. nov.

- (A) Showing size of caudal shield, black dorsal blotches and lack of anterior enlargement of the body  $\times \frac{3}{4}$  natural size.
- (B) Ventrilateral view of head  $\times 7 \frac{3}{16}$  natural size.
- (C) Enlarged head of photograph (a) showing dorsal scalation  $\times 7$  natural size.